

Title (en)  
Ldpc encoder and decoder

Title (de)  
LDPC-Codierer und -Decodierer

Title (fr)  
Encodeur et décodeur LDPC

Publication  
**EP 2890016 A1 20150701 (EN)**

Application  
**EP 13306892 A 20131230**

Priority  
EP 13306892 A 20131230

Abstract (en)  
Embodiments relate to an LDPC encoder (1000) for encoding an input signal (1002). The LDPC encoder (1000) comprises a first encoder entity (1010) to provide, in accordance with a first LDPC encoding rule, a first encoded output signal (1012) based on the input signal (1002); a second encoder entity (1020) to provide, in accordance with a second LDPC encoding rule, a second encoded output signal (1022) based on the input signal (1002); wherein a first bipartite graph (500-1) corresponding to the first LDPC encoding rule is coupled to a second bipartite graph (500-2) corresponding to the second LDPC encoding rule via one or more shared nodes among the first and the second bipartite graph (500-1; 500-2).

IPC 8 full level  
**H03M 13/11** (2006.01); **H03M 13/00** (2006.01); **H03M 13/29** (2006.01)

CPC (source: EP)  
**H03M 13/1102** (2013.01); **H03M 13/1117** (2013.01); **H03M 13/1122** (2013.01); **H03M 13/114** (2013.01); **H03M 13/1154** (2013.01); **H03M 13/116** (2013.01); **H03M 13/118** (2013.01); **H03M 13/255** (2013.01); **H03M 13/296** (2013.01); **H03M 13/3972** (2013.01); **H03M 13/6561** (2013.01)

Citation (search report)  
• [X1] US 2013139025 A1 20130530 - GIOULEKAS FOTIOS [GR], et al  
• [XA] US 2013086456 A1 20130404 - YEDIDIA JONATHAN [US], et al  
• [A] EP 2204911 A1 20100707 - PANASONIC CORP [JP]  
• [A] US 2008109708 A1 20080508 - KIM DONG-HO [KR], et al  
• [A] US 2011307756 A1 20111215 - NGUYEN THUY V [US], et al  
• [A] EP 2525496 A1 20121121 - PANASONIC CORP [JP]  
• [X1] OLMOS PABLO M ET AL: "A finite length performance analysis of LDPC codes constructed by connecting spatially coupled chains", 2013 IEEE INFORMATION THEORY WORKSHOP (ITW), IEEE, 9 September 2013 (2013-09-09), pages 1 - 5, XP032536270, ISBN: 978-1-4799-1321-3, [retrieved on 20131220], DOI: 10.1109/ITW.2013.6691239 & DMITRI TRUHACHEV ET AL: "Improving spatially coupled LDPC codes by connecting chains", INFORMATION THEORY PROCEEDINGS (ISIT), 2012 IEEE INTERNATIONAL SYMPOSIUM ON, IEEE, 1 July 2012 (2012-07-01), pages 468 - 472, XP032225922, ISBN: 978-1-4673-2580-6, DOI: 10.1109/ISIT.2012.6284232

Citation (examination)  
LAURENT SCHMALEN ET AL: "Combining Spatially Coupled LDPC Codes with Modulation and Detection", 24 January 2013 (2013-01-24), MUNICH, GERMANY, pages 1 - 6, XP055233330, Retrieved from the Internet <URL:http://ieeexplore.ieee.org/ielx7/6468888/6468889/06469365.pdf?tp=&arnumber=6469365&isnumber=6468889> [retrieved on 20151203]

Cited by  
CN109933457A; CN110959264A; CN111294061A

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 2890016 A1 20150701**; WO 2015101521 A1 20150709

DOCDB simple family (application)  
**EP 13306892 A 20131230**; EP 2014078726 W 20141219